

0590
0328

10



OIPE

ENTERED

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/820,790B

DATE: 04/04/2003

TIME: 14:21:06

Input Set : A:\1204 SUBST_SEQLIST 20030324.TXT

Output Set: N:\CRF4\04042003\I820790B.raw

4 <110> APPLICANT: SHAO, Wei et al.
6 <120> TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
7 ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES
8 THEREOF
10 <130> FILE REFERENCE: CL001204
C--> 12 <140> CURRENT APPLICATION NUMBER: US/09/820,790B
C--> 12 <141> CURRENT FILING DATE: 2003-03-24
12 <160> NUMBER OF SEQ ID NOS: 30
14 <170> SOFTWARE: FastSEQ for Windows Version 4.0
16 <210> SEQ ID NO: 1
17 <211> LENGTH: 2218
18 <212> TYPE: DNA
19 <213> ORGANISM: Homo sapiens
21 <400> SEQUENCE: 1
22 cgggcgcggc ggcggcggcg gtgacagcgg cgcccgcgcc tccccgcgcg taggtgtgcg 60
23 gcgcgctcct ggcgaggacg gagcgagcag atctcgcggt cgctcgccgc ccggcgcgag 120
24 ccagcccggc cccgcgcttg cgccgcgagc cgaggtgtct cccgcgcccg cgcccggtgc 180
25 gccgcgctgc ccgcgagcgg gagccggagt cgccgcgccc cgagcgcgagc cgagcgcgacg 240
26 ccgagcccgt ccgcgcccgc catggccacc acggtgacct gcacccgctt caccgacgag 300
27 taccagctct acgaggatat tggcaagggg gctttctctg tggtcgacg ctgtgtcaag 360
28 ctctgcaccg gccatgagta tgcagccaag atcatcaaca ccaagaagct gtcagccaga 420
29 gatcaccaga agctggagag agaggctcgg atctgccgcc ttctgaagca ttccaacatc 480
30 gtgcgtctcc acgacagcat ctccgaggag ggcttccact acctggtctt cgatctggtc 540
31 actggtgggg agctctttga agacattgtg gcgagagagt actacagcga ggctgatgcc 600
32 agtcactgta tccagcagat cctggaggcc gttctccatt gtcaccaaatt gggggtcgtc 660
33 cacagagacc tcaagccgga gaacctgctt ctggccagca agtgcaaagg ggctgcagtg 720
34 aagctggcag acttcggcct agctatcgag gtgcaggggg accagcaggc atggtttggt 780
35 ttcgctggca caccaggcta cctgtccctt gaggtccttc gcaaagaggc gtatggcaag 840
36 cctgtggaca tctgggcatg tgggggtgat ctgtacatcc tgctcgtggg ctaccacccc 900
37 ttctgggacg aggaccagca caagctgtac cagcagatca aggctggtgc ctatgacttc 960
38 ccgtccccctg agtgggacac cgctactcct gaagccaaaa acctcatcaa ccagatgctg 1020
39 accatcaacc ctgccaaagc catcacagcc catgaggccc tgaagcaccg gtgggtctgc 1080
40 caacgtcca cggtagcatc catgatgcac agacaggaga ctgtggagtg tctgaaaaag 1140
41 ttcaatgcca ggagaaagct caagggagcc atcctcacca ccatgctggc cacacggaat 1200
42 ttctcagtgg gcagacagac caccgctccg gccacaatgt ccaccgcggc ctccggcacc 1260
43 accatggggc tggtggaaca agccaagagt ttactcaaca agaaagcaga tggagtcaag 1320
44 ccccagacga atagcaccaa aaacagtgcg gccgccacca gccccaaagg gacgcttcct 1380
45 cctgccgccc tggagcctca aaccaccgtc atccataacc cagtggacgg gattaaggag 1440
46 tcttctgaca gtgccaatac caccatagag gatgaagacg cttaaagccc gaagcaggag 1500
47 atcattaaga ccacggagca gctcatcgag gccgtcaaca acggtgactt tgaggcctac 1560
48 gcattctact tcgagaacct gctggccaag aacagcaagc cgatccacac gaccatcctg 1620
49 aaccacacg tgcacgtcat tggagaggat gccgcctgca tcgcttacat ccggctcacg 1680
50 cagtacattg acgggcaggg ccggccccgc accagccagt ctgaggagac ccgcgtgtgg 1740

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/820,790B

DATE: 04/04/2003

TIME: 14:21:06

Input Set : A:\1204 SUBST_SEQLIST 20030324.TXT

Output Set: N:\CRF4\04042003\I820790B.raw

```

51 caccgcccgcg acggcaagtg gcagaacgtg cacttccact gctcggggcg gcctgtggcc 1800
52 ccgctgcagt gaagccaagg gaggggcaca gaatggggaa caggacacag gatccctaaac 1860
53 tccaagggga ctgtccaccg atgaacactc agagtggaca ccatcttcgg tccacgctgt 1920
54 gcccaggaca gctgtcccca tccatgaaca cagggtaaac atctgccggg ctccgcacca 1980
55 gtggtccctt gggccatggg acagcggcag ggctcaccac ggacagcacg tggcccagca 2040
56 gccggccacc ctggcgctct ggggcctcct cccctcctct cctctcacc ttgtcacctc 2100
57 cacggagctg cctgtctggg ataatttggg gatttttttt tctgggggat aattcttttg 2160
58 catgaccctt aaagagcaag ccacaccggt ctgctagcta ggtgtccgcg gtgtgggtg 2218
60 <210> SEQ ID NO: 2
61 <211> LENGTH: 516
62 <212> TYPE: PRT
63 <213> ORGANISM: Homo sapiens
65 <400> SEQUENCE: 2
66 Met Ala Thr Thr Val Thr Cys Thr Arg Phe Thr Asp Glu Tyr Gln Leu
67 1 5 10 15
68 Tyr Glu Asp Ile Gly Lys Gly Ala Phe Ser Val Val Arg Arg Cys Val
69 20 25 30
70 Lys Leu Cys Thr Gly His Glu Tyr Ala Ala Lys Ile Ile Asn Thr Lys
71 35 40 45
72 Lys Leu Ser Ala Arg Asp His Gln Lys Leu Glu Arg Glu Ala Arg Ile
73 50 55 60
74 Cys Arg Leu Leu Lys His Ser Asn Ile Val Arg Leu His Asp Ser Ile
75 65 70 75 80
76 Ser Glu Glu Gly Phe His Tyr Leu Val Phe Asp Leu Val Thr Gly Gly
77 85 90 95
78 Glu Leu Phe Glu Asp Ile Val Ala Arg Glu Tyr Tyr Ser Glu Ala Asp
79 100 105 110
80 Ala Ser His Cys Ile Gln Gln Ile Leu Glu Ala Val Leu His Cys His
81 115 120 125
82 Gln Met Gly Val Val His Arg Asp Leu Lys Pro Glu Asn Leu Leu Leu
83 130 135 140
84 Ala Ser Lys Cys Lys Gly Ala Ala Val Lys Leu Ala Asp Phe Gly Leu
85 145 150 155 160
86 Ala Ile Glu Val Gln Gly Asp Gln Gln Ala Trp Phe Gly Phe Ala Gly
87 165 170 175
88 Thr Pro Gly Tyr Leu Ser Pro Glu Val Leu Arg Lys Glu Ala Tyr Gly
89 180 185 190
90 Lys Pro Val Asp Ile Trp Ala Cys Gly Val Ile Leu Tyr Ile Leu Leu
91 195 200 205
92 Val Gly Tyr Pro Pro Phe Trp Asp Glu Asp Gln His Lys Leu Tyr Gln
93 210 215 220
94 Gln Ile Lys Ala Gly Ala Tyr Asp Phe Pro Ser Pro Glu Trp Asp Thr
95 225 230 235 240
96 Val Thr Pro Glu Ala Lys Asn Leu Ile Asn Gln Met Leu Thr Ile Asn
97 245 250 255
98 Pro Ala Lys Arg Ile Thr Ala His Glu Ala Leu Lys His Pro Trp Val
99 260 265 270
100 Cys Gln Arg Ser Thr Val Ala Ser Met Met His Arg Gln Glu Thr Val
101 275 280 285

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/820,790B

DATE: 04/04/2003

TIME: 14:21:06

Input Set : A:\1204 SUBST_SEQLIST 20030324.TXT

Output Set: N:\CRF4\04042003\I820790B.raw

```

102 Glu Cys Leu Lys Lys Phe Asn Ala Arg Arg Lys Leu Lys Gly Ala Ile
103      290      295      300
104 Leu Thr Thr Met Leu Ala Thr Arg Asn Phe Ser Val Gly Arg Gln Thr
105 305      310      315      320
106 Thr Ala Pro Ala Thr Met Ser Thr Ala Ala Ser Gly Thr Thr Met Gly
107      325      330      335
108 Leu Val Glu Gln Ala Lys Ser Leu Leu Asn Lys Lys Ala Asp Gly Val
109      340      345      350
110 Lys Pro Gln Thr Asn Ser Thr Lys Asn Ser Ala Ala Thr Ser Pro
111      355      360      365
112 Lys Gly Thr Leu Pro Pro Ala Leu Glu Pro Gln Thr Thr Val Ile
113      370      375      380
114 His Asn Pro Val Asp Gly Ile Lys Glu Ser Ser Asp Ser Ala Asn Thr
115 385      390      395      400
116 Thr Ile Glu Asp Glu Asp Ala Lys Ala Arg Lys Gln Glu Ile Ile Lys
117      405      410      415
118 Thr Thr Glu Gln Leu Ile Glu Ala Val Asn Asn Gly Asp Phe Glu Ala
119      420      425      430
120 Tyr Ala Phe Tyr Phe Glu Asn Leu Leu Ala Lys Asn Ser Lys Pro Ile
121      435      440      445
122 His Thr Thr Ile Leu Asn Pro His Val His Val Ile Gly Glu Asp Ala
123      450      455      460
124 Ala Cys Ile Ala Tyr Ile Arg Leu Thr Gln Tyr Ile Asp Gly Gln Gly
125 465      470      475      480
126 Arg Pro Arg Thr Ser Gln Ser Glu Glu Thr Arg Val Trp His Arg Arg
127      485      490      495
128 Asp Gly Lys Trp Gln Asn Val His Phe His Cys Ser Gly Ala Pro Val
129      500      505      510
130 Ala Pro Leu Gln
131      515

```

134 <210> SEQ ID NO: 3

135 <211> LENGTH: 28438

136 <212> TYPE: DNA

137 <213> ORGANISM: Homo sapiens

139 <400> SEQUENCE: 3

```

140 gagctgctgt gtctctgtcc ccaggggagc aggggctgtg gggttgcagg ctcagcgtct 60
141 gggactctgg ggtgaaggct cagccatgcc ctgcagacac catggggcag ggctcagacc 120
142 tgtgcacctg tctcttgcaa accactgttt tctctgtttt gtaaccccc acccaacccc 180
143 acataacacc tctgggttta aacaacatgc acccttgtgc cggtcacctc cctgcagccg 240
144 gagaacctgc ttctggccag caagtgcaaa ggggctgcag tgaagctggc agacttcggc 300
145 ctagctatcg aggtgcaggg ggaccagcag gcatggtttg gtgagtgcc ggggcagggt 360
146 gtgttggtcg gcagttggca gggcaggagg tgatgctgac agccccttgt ggctcttcc 420
147 cctctctcta ggttctgctg gcacaccagg ctacctgtcc cctgaggtcc ttgcaaaga 480
148 ggcgatggc aagcctgtgg acatctgggc atgtggtgag gcctggcctg agttggtgcg 540
149 gggcagggcc tcgggtgttt caggacttcc cacctacatc ctggagtgtg cagtggccag 600
150 cagctcttgc tctcatctgg gtttatctgt gtcagacctg cccttgagct gccctggcag 660
151 gggctctgcc acacagccaa gagccccctt tccaccaga ttagaattgc tcacatgaac 720
152 ctggcgccac ccagtgtctg cctgcgctca gcagaggtct ggtccagaag tgtggtgggt 780
153 ggatgggagt ggagaagaga ggtcaggggc tgttgggcca tgggcagggc cacctccttg 840

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/820,790B

DATE: 04/04/2003

TIME: 14:21:06

Input Set : A:\1204 SUBST_SEQLIST 20030324.TXT

Output Set: N:\CRF4\04042003\I820790B.raw

```

154 ggtaggggtc tctcccccaga gagggtgggga gcagcagagg ggcttgacat caccctcatc 900
155 cctgtgatag tgtgggtgtg gggcagaggt cagggggccg gctgtgccct tctaccccag 960
156 tgtctgctgc acaggtgggg gcaaaggaat gctgaggacc ccaatgccct cccagggcca 1020
157 caggagctag gcagtgaggg tgcagggcag gggcttcatg gacggtggca ccctgcaagt 1080
158 ggctgcggtg ctcacaggcc ccatccgcag ggggtgatcc gtacatccctg ctcggtgggt 1140
159 acccaccctt ctgggacgag gaccagcaca agctgtacca gcagatcaag gctgggtgct 1200
160 atgacgtgag tgcaccagcc cctctctgat gagctccctt cctccagggtg tggccgggtg 1260
161 agggcagcgt gggagagagg taggagtggg gtgaagccac ctgtggccag gtccgtgggtc 1320
162 ctgctctccc agattcgtgg ctggagatga agcccccttg agaattcttg cccctgcctg 1380
163 agagggagct tcaggcccgg ccggggcgct gtttccttct gcagttcccg tcccctgagt 1440
164 gggacaccgt cactcctgaa gccaaaaacc tcatcaacca gatgctgacc atcaaccctg 1500
165 ccaagcgcac cacagcccat gaggccctga agcaccctg ggtctgcgtg agtcgccctt 1560
166 ggtgcccatg gtggggaggg ggctcctggt ggagatggcc tcagaccact cccctggcaa 1620
167 ggaccccaag agggctcctg tctgacatc caagagctcc cttgggtccc ctgggtgctc 1680
168 cttgtggcct ctggcctggg acataccagc acgtttgtga ggccctggggc ttggaaggca 1740
169 tttagaggta gaggtgatcc cttcctccca actgcagtc tgtctgtgag gggcagagt 1800
170 gacgaggcaa gggagagacg agtcttgaag tcccaggcgg gtggggacag acaacccttg 1860
171 ccgcaatggt ggccgggtggc tcttggaag tggggacccc aggggtgccac aagccttgcc 1920
172 accctggcct ctcccctgtg cctcgggctc ggctgccata tgaccaccca tttccccaca 1980
173 gcaacgctcc acggtagcat ccatgatgca cagacaggag actgtggagt gtctgaaaaa 2040
174 gttcaatgcc aggagaaagc tcaaggtgag gccctggccc ctagtcccag gcacggccat 2100
175 gcttctctgt gtcccctctg gctggagcag gggggccttg gggggctctg gcagacctag 2160
176 gggttactgc tgcccccaag actgactgtt agcaagtccc agactggatg catcagggtga 2220
177 actcaggcca gcttggaat gagtccagag gggccctggg ccagggtgtg ctccctctag 2280
178 ttgtctgtgc caccctctag cagcccttg aggagctgtc ctgaagcgct cgctgtgggc 2340
179 tctcaccceg ggctctgcag gcagactca cctctggca gtacactgt ttagtacaag 2400
180 caagtccgaa gcttccggct cagacaggtt tggttaaggag agcagagcca cacacactgg 2460
181 tcttggttg gctgggggag ttctgggagg gagggtgggtc ccagtagggt atccaacctg 2520
182 cctgcttttg tcagggtggt ctcgggtgac cgcacactgg cagtccctct acttgtgggt 2580
183 tccgggtagg ggacttgtt cctgactgcc ctctgctggt ctctgagcag ttctccccgg 2640
184 aagccccag actgttgccc tgtctgagcc tgtcaggaaa agaaggggct gtcaggagc 2700
185 tggaccccag aggagctgcc gtggtgacca gctgttctgg tgaccctga ggcttgagg 2760
186 gtcttgaagc agctagaagc tgtagtgtgt caacagggtt aggccaggg tgtgtgtagt 2820
187 tctggaaata ggtgatctgt ctcagtgcgg ctgctggctt cctggagctc ttgcctctct 2880
188 ggaaggctga ggtcatgtca gcctcatgac aatgaggctg agcatctggg caggaggaca 2940
189 ggggtcttat cctggccaga agccagcagg gaacactgat gggatagccc cggttttatc 3000
190 tgtgtctctc cccagggagc catcctcacc accatgctgg ccacacggaa tttctcaggt 3060
191 gagcctttct tctccaggga gacaggcgct gccccctccc tgctggccca cgcaggagag 3120
192 cgccctcttc ctcaccagcc tctccactcc tctctgcgg caggcctgcc ctcggcgtct 3180
193 gccctcagct ctgagaccca ctgcccactt gggcccgcgt ggctcccacc ttgggtgata 3240
194 ccacagggtc cagccccccg agggccatcac cttcgtgctg ggtctgtgtc cctccacccc 3300
195 ctgaacacga gcgtctgtgc tgccccactg gggctcacag catcgtgtgt gtctgtccag 3360
196 gcgtttgtcg ggcactctat tggcctcctt gtcattttga gtgctctgaa cattgtgttt 3420
197 tgtgcgggag gtgggcagaa gggatgcggg gtgatgcggg aggctcgggg gcctccttcc 3480
198 aagttctgga tgagctgcag cctcctgtcc cggctgctca ggggtgggtg ttgggaagca 3540
199 agttctcttg gcaggggggt ggggtctgtt atagaccctt gaggcccagg gcgctggcag 3600
200 acccatcggt gcatgatgtt agccccggag tggagccggc agcccaggct tggacaagct 3660
201 gtacctgtgg cttctccgtc gtccgacact ccgtgtgcga gcgtctgtga tccgtctctc 3720
202 tcgttgctcg tttgcatctg gtgcccccca cccgccatcc tgttactttt gctgtgatgc 3780

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/820,790B

DATE: 04/04/2003

TIME: 14:21:06

Input Set : A:\1204 SUBST_SEQLIST 20030324.TXT

Output Set: N:\CRF4\04042003\I820790B.raw

```

203 tgtaatgccg ggaacgcgtg cacacgggtca caccaacact aataggactg tcctgtctgc 3840
204 tgtgtgctca ccacaccctt tgggcatgag aagccccac tggggttttc taaggagaaa 3900
205 ggaggcaaat gcttttccgt gtcaatcagt ccaatcttgt ttctactctc ttgagcaaa 3960
206 gattctggaa ccatctgtca cctaaacttt aactctaate ttcttctgct tcctttgtct 4020
207 cttttcttcc cttacctgc ccacccctcg tctgtgtccg cccacccctc ctttccctc 4080
208 gtctctaacc cgggtgtaac agtgggcaga cagaccaccg ctccggccac aatgtccacc 4140
209 gcggccctcc gcaccaccat ggggctggtg gaacaaggta gatgtgtctc gaccagcgtc 4200
210 ccgcccgtc ccgcccgtcc ctctgccag catgcagccc cctgctgcac gcagccgtg 4260
211 gccgggtcc agagccgccc cagaggccgc caggcccccg ggagccctg ctcccggtg 4320
212 gtcacatccc agcagagccc accacaaggg cagggaggca gcccccaagg ctctcgct 4380
213 gtaagaggag gggctgggct aggtggcccc tgggctacac caagccctc tggctctggc 4440
214 ccccgaggtc tgggggtccg gagaccccc ttaagaatgg cctgggcccc acaggagacc 4500
215 actgggctg ctgctggggg gtctgaatcc tgaaaggaga gccttgagga gcagagccag 4560
216 agaggcagag gcccttgggg gagacacaca ccctgcccct ctggggccgc atggagacgg 4620
217 tgggtctgtc tgtgagtc ccacatgca tgtctgccct gagcatcccc ccaggacaag 4680
218 ccgctctgga gtgggtgagg gttttatgca ccctgaggag actttcaagg ctctctctg 4740
219 ggttggttct gcaaagtc cctccctgg cctcaaacc tgtgaggga aaggccggca 4800
220 ctggccacct gctcctctg gctgtgccc gccagagccc agaggcccaa gttggcttct 4860
221 gccacctgc tggcttgtga ccatgggcag accccatgag ggctaggcga cccaagacc 4920
222 tccttgagc tccagcctga gctgaaggct ggtgagagct tagggcaggc caagctgaca 4980
223 acgctggcc acagaacaca gagggctaca ggggtgacct cagatcctcc ctgggctgag 5040
224 ctgctgagtt ccctgtcgg gcctccaacg tgggctgggg acccggcaga ggttccaggg 5100
225 tgcctggagac tgccttcccc aggcctctc atgaccaca ggggtgagcag cctggccttc 5160
226 ccagccagag aacctcctt ctggggaggc ccagggcgtc ctggggagg gcagctatt 5220
227 ctctcccat gagcccagtg gacgtgtcta gcaggcagca ccccgggaga gccctccac 5280
228 gtcttctcca tttagacagg ctttccagag cgaggcggg agggggctgt gattagaaaa 5340
229 gagtgaggct agtggcttct ggggaggcac tgcgtcccag gggacagtgc tgagagacag 5400
230 ctgcctctac gctgcccgt gcccggggt cccgctgcaa tgcccgcctg tctgcaagt 5460
231 aacgtggggc gacgggtgc atgtgtggct ccacctggg cgccgagagc 5520
232 agctctgtcc tggagggtgg tcagtgcag tggacagagc ccagcatggc tgcctgggt 5580
233 gaccagctaa ggggacaagg cagaggcagg gctgagagga ccacctatc tgtaggtca 5640
234 gccagctca gccatatcac acggcagtga gcatggagct cagttctctg ccaatggcag 5700
235 ctgagtctag taccatccag tcagagtctg gtaccagccc atgtggcata gccccctcg 5760
236 ccgcagaga gaccccgct gtcgagtgtg cttcagttt gcctctgtg tctctctgc 5820
237 attgatcagg tgtaagggca taggagacc agtgtccggc cagctgcagg gtggcagcag 5880
238 ttgccccggc ctggagaccc gggaatggg agtgccctcc caggatggag ggcagagggt 5940
239 ctctccttgt cccacagagg cctgcagaac ccccaacca ggtgtctgag atgctgtga 6000
240 ctgctccgcc taccctggg tcctgcggca cctaacgcat gctttgaact tgagacacag 6060
241 aaaggaagt cccgtgccct tgaatgctag tgtagatgg catcgacag actctggcca 6120
242 cggtaaatct ggagttagtc ccaggcagag atgtgaaatg agcagcccc caaaaaatg 6180
243 ttggccggga gccatgcact caggagggccc gggcccatgc accccact gcgcccagg 6240
244 cgtgcacaag cgattgtttt aaaagcgggt tcacaaggaa ggatgtttg gaactgactg 6300
245 agacaacagg gacgtctgtc gcagggcttc ccagagctct gatggcagc tcggcctgag 6360
246 tccttcgagg agggctggt tgtacgtggc atttgtgtcc cactggactg tgaacttctg 6420
247 tctttttatt tccactgct gctgtgttac atctccagta gcatagttt gaaatgcagg 6480
248 ttttgataga ctcaaggatc taaatagaac cctcttagta ccaaggactg tccggggtct 6540
249 ctgccagccc cgccgatgg cctaactgtg gtgcctcct tcctgtgaga atcttctgag 6600
250 gacatgccc gggaaagag tcagttctgc tgcctcctag ggtgccatgc tggccccgg 6660
251 tccaatgcag agcctagctg gaagtaccgc tgggttggcg gaggctacgt gcctgactgt 6720

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/820,790B

DATE: 04/04/2003

TIME: 14:21:07

Input Set : A:\1204 SUBST_SEQLIST 20030324.TXT

Output Set: N:\CRF4\04042003\I820790B.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date